TONY KNOWLES, GOVERNOR

410 Willoughby Ave., Ste 105
Juneau, AK 99801-1795
PHONE: (907) 465-5065
FAX: (907) 465-5070
http://www.state.ak.us/dec/

DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER

April 5, 1999

Randall F. Smith, Director
Office of Water, USEPA
1200 Sixth Avenue
Seattle, WA 98101

Dear Mr. Smith:

With this letter I am transmitting for Environmental Protection Agency approval the revised Alaska water quality standards that will take effect under state law on April 24, 1999. This transmittal includes: the regulations (enclosure 1); the Alaska Attorney General's certification of the legality of the regulations (enclosure 2); the Order adopting the regulations of the Department of Environmental Conservation (enclosure 3); the filing certification signed by Lt. Governor Fran Ulmer on March 25, 1999 (enclosure 4); the response to comments (enclosure 5); and the Decision Document that provides the rationale for the site-specific criteria (enclosure 6). Pursuant to Section 303(c)(2)(B)(3) of the Clean Water Act, this submittal formally initiates EPA's sixty-day review and approval process.

This amendment to the water quality standards establishes site-specific criteria for a defined portion of upper Cook Inlet near Point Woronzof. Criteria include acute and chronic aquatic life criteria for arsenic, cadmium, chromium VI, copper, lead, mercury, nickel, selenium, silver, and zinc (all measured as dissolved metal) and a criterion for turbidity.

If you have any questions, please contact Deena J. Henkins at (907) 465-5312. We look forward to getting your approval.

Sincerely,

Michele Brown
Commissioner

Enclosures: Enclosure 1 – April 24, 1999 Alaska Water Quality Standards
Enclosure 2 – Alaska attorney General's certification of the legality of the regulations
Enclosure 3 – Order adopting the regulations of ADEC
Enclosure 4 – Lt. Governor's filing certification
Enclosure 5 – response to comments
Enclosure 6 – decision document

cc: Sally Brough, Water Quality Standards Unit, EPA Region 10 (w/encl.1 only)
Brian Crewdson, Municipality of Anchorage (w/o encl.)

G:\AWQ\SHARED\LETTERS\MOASSCSEPALTR.DOC

18 AAC 70.236 is amended by adding a new paragraph to read:

(b) Waterbodies subject to site-specific criteria, and the applicable site-specific criteria, are:

18 AAC 70.236(b) WATERSHED TYPE/NAME	NUMBER*	LATITUDE LONGITUDE**	LOCATION	REACH OF WATER AFFECTED	WATER QUALITY PARAMETER	DESIGNATED USE CLASS AFFECTED	SITE-SPECIFIC CRITERIA
(4) Cook Inlet	19020401*	61°12' 2.5" N 150°01' 8.7" W (end of outfall pipe for Municipality of Anchorage wastewater treatment plant)	Vicinity of Point Woronzof, Anchorage	see footnote ***	Arsenic ****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	36 µg/l (chronic) 69 µg/l (acute) measured as dissolved metal
					Cadmium****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	9.3 µg/l (chronic) 42 µg/l (acute) measured as dissolved metal
					Chromium****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	50 µg/l (chronic) 1100 µg/l (acute) measured as dissolved metal
					Copper****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	3.1 µg/l (chronic) 4.8 µg/l (acute) measured as dissolved metal
					Lead****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	8.1 µg/l (chronic) 210 µg/l (acute) measured as dissolved metal
					Mercury****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	0.025 µg/l (chronic) 1.8 µg/l (acute) measured as dissolved metal
					Nickel****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	8.2 µg/l (chronic) 74 µg/l (acute) measured as dissolved metal
					Selenium****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	71 µg/l (chronic) 290 µg/l (acute) measured as dissolved metal
					Silver****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	1.9 µg/l (acute) measured as dissolved metal
					Zinc****	(2)(A)(i), (2)(A)(ii) (2)(B)(i) (2)(C) & (2)(D)	81 µg/l (chronic) 90 µg/l (acute) measured as dissolved metal
					Turbidity	(2)(A)(i), (2)(B)(i) (2)(B)(ii) (2)(C) & (2)(D)	May not exceed the natural condition

* Watershed numbers refer to watersheds established by the United States Department of Interior, Geological Survey, "Hydrologic Unit Map - 1987 State of Alaska," adopted by reference in 18 AAC 70.230; information about how to obtain this document is set out in the footnote to the table in 18 AAC 70.230(e).
** River latitudes and longitudes are set at the downstream end of the affected river reach.
*** Upper Cook Inlet in the vicinity of Point Woronzof, an area bounded by the constriction of Knik Arm at Cairn Point to the northeast, by the southern shoreline of Cook Inlet southwest to Point Campbell, by a line from Point Campbell to the northeast end of Fire Island, by a line due north from the northeast end of Fire Island to the northern shoreline of Cook Inlet at a point east of the mouth of the Little Susitna River, by the northern shoreline of upper Cook Inlet north and east to a point directly west of Cairn Point; and from that point by a line due east to Cairn Point; a map of the area subject to these site-specific criteria is available at the department's offices in Anchorage, Fairbanks, and Juneau.
**** This metal is a toxic substance as defined in 18 AAC 70.990, and falls under the parameter of "Toxics and Other Deleterious Organic and Inorganic Substances" in 18 AAC 70.020(b). (Eff. 12/12/97, Register 144; am 3/1/98, Register 145; am 4/24/99, Register 150)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.080

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

January 29, 1999

Reply To
Attn Of: OW-134

Deena Henkins
Environmental Conservation Manager
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, AK 99801-1795

Dear Ms. Henkins:

The Environmental Protetection Agency (EPA) has completed its review of the Public Review Draft of the Water Quality Standards (WQS), 18 AAC 70, for site-specific criteria for metals and turbidity for a portion of Upper Cook Inlet in the vicinity of Point Woronzof. We have also reviewed the detailed request for *Site-Specific Criteria for Point Woronzof Area of Cook Inlet* submitted by the Municipality of Anchorage, Anchorage Water and Wastewater Utility.

The request for Site-Specific Criteria (SSC) document presents a well researched technical justification for SSC for metals and turbidity in the upper Cook Inlet area. The site-specific area is clearly defined and the characteristics of the site that warrant development of SSC have been reasonable articulated.

The proposed SSC for metals involve changes to the form of metal (dissolved versus total recoverable) and numeric values. The proposal for SSC for metals is to implement dissolved metals criteria in the site-specific area. This approach to metals implementation conforms with EPA's metals policy which has been articulated in "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria," October 1, 1993 by Martha G. Prothro, Acting Assistant Administrator for Water, and the EPA Federal Register Notice dated May 4, 1995 for "Establishment of Numeric Criteria for Priority Toxic Pollutants: State's Compliance-Revision of Metals Criteria" (60 FR 22229). With the exception of mercury, the dissolved metals criteria that are presented in the request for SSC and the public review draft are consistent with the criteria that EPA recently published in a December 10, 1998 Federal Register Notice of "National Recommended Water Quality Criteria: Notice (63 FR 68354).

Similarly, the proposed SSC for mercury involve changes to the form of the metal and the numeric values of the criteria. The EPA December 10,1998 aquatic life mercury criteria are expressed as dissolved which represents a change in EPA policy for mercury. EPA no longer uses the Final Residue Value (FRV) for deriving criteria for new or revised 304(a) aquatic life. In the past, use of the FRV approach resulted in aquatic life metals criteria expressed as total recoverable metal. The proposed SSC for mercury, expressed as dissolved is consistent with this new EPA approach. The proposed marine acute aquatic life criterion for mercury is consistent with EPA's December 10, 1998 FR Notice acute criterion. The proposed marine chronic aquatic life criterion for mercury is more stringent than EPA's most recent published criterion.

EPA's most recent aquatic life criteria for mercury point out two limitations for these criteria. Footnote "hh" in the December 1998 "National Recommended Water Quality Criteria" states that the aquatic life mercury criteria "were derived from data for inorganic mercury (II) , but are applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, these criteria will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a greater extent, these criteria do not account for uptake via the food chain because sufficient data were not available when the criteria were derived."

The detailed Request for SSC document has collected data and developed a technical justification to resolve the issues quoted above. The "under protective" issue has been addressed with the presentation of methylmercury data for the waters at the site. These data demonstrate that methylmercury is not a "substantial portion" of the mercury in the water column. The request for SSC document has also presented a detailed discussion of the biogeochemistry of mercury which explores the likely transformations of mercury in the site-specific area and it concludes that the "non-dissolved mercury fraction associated with the sediment loads from the river is essentially unavailable for conversion to methylmercury." The request for SSC document has also presented additional information dealing with the bioavailability of mercury in the site-specific area relative to the food chain and human consumption of aquatic life.

The proposed revisions to the turbidity criterion are justified based on the high levels of suspended sediments delivered by the rivers in the vicinity of the site-specific area. Data are presented that show the high TSS levels in the rivers which provides a reasonable justification for the proposed changes to the turbidity criterion.

EPA and Alaska Department of Environmental Conservation (DEC) will need to resolve a related procedural and timing issue regarding EPA review and potential approval of these SSC. Alaska remains in the National Toxic Rule for aquatic life criteria for nickel (acute), selenium (acute and chronic), and zinc (acute). The NTR prohibits Alaska from developing site-specific criteria for these pollutants until Alaska adopts criteria for them and EPA removes Alaska from the NTR with a final rule-making. We are also aware that Alaska is in the final stages of formal adoption of NTR criteria for these specific metals.. We will need to discuss the timing of Alaska DEC submittal of the Governors Workgroup water quality standards revisions to EPA, EPA's Endangered Species Act consultation on these revisions, Alaska DEC submittal of the SSC for the Point Woronzof area of Cook Inlet, and EPA's removal of Alaska from the NTR for these three metals.

If you have any questions concerning these comments and the timing of the various EPA and Alaska DEC actions please contact me at (206) 553-1295. I look forward to working with you in the future on this project.

Sincerely,

Sally Brough

Sally Brough
Water Quality Standards Coordinator

From: JOHN YEARSLEY
To: R0BAKER.LIDGARD-MICHAEL, CIRONE-PATRICIA
Date: 1/27/99 3:20pm
Subject: Anchorage 301(h) Application

Mike, I've reviewed Section III.A of the Anchorage 301(h) NPDES Renewal Application and have no comments. It is well done and provides a thorough analysis of mixing zone issues.

Let me know if you have any further questions.

John Yearsley

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

MAY - 4 1999

ESA, EFH supporting documents -

Reply To
Attn Of: OW-130

Brian Crewdson
Assistant to the General Manager
Anchorage Water and Wastewater Utility
3000 Arctic Boulevard
Anchorage, Alaska 99503-3898

Re: John M. Asplund Water Pollution Control Facility, NPDES Permit Application

Dear Mr. Brian Crewdson:

The purpose of this letter is to request additional information to support the NPDES permit application which you have submitted for the John M. Asplund facility (Renewal Application for NPDES Permit and 301(h) Variance from Secondary Treatment, October 1998). Additional information is requested to support the effluent flow, BOD_5, and TSS projections provided in the application, specifically, responses to questions II.A.4. and II.A.5.

Please provide additional information to describe how the effluent limitations in response to question II.A.4.a. were derived. The response states that the limitations are based on projected population and industry growth but provides no specifics and does not correlate with population growth values provided elsewhere in the application. The limitations are significantly higher than those provided in response to question II.A.5. of the application.

Similarly, please provide additional information to support the values in the table responding to question II.A.5.a. You may show historic and projected population patterns and growth in effluent BOD_5 and TSS. Please demonstrate why annual average flows between 1997 and 2005 increase by 7% yet BOD_5 and TSS are expected to increase by 58% and 28% respectively. Also, it would be helpful to itemize the BOD increases by category such as: population growth, new industry, percent removal decline (if any), and growth in existing industrial sectors. When the values in this response are converted to a concentration basis, they are significantly lower than those provided in the response to question II.A.4. Please provide an explanation for the BOD_5 and TSS concentration differences between the two responses.

Thank you in advance for responding to this request. Your response will assist us in moving forward with reissuance of the NPDES permit. Please call me if you have any questions at (206)553-1755.

Sincerely

Mike Lidgard

Michael Lidgard
NPDES Permits Unit

cc: Tim Wingerter, ADEC

CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA
95833-2937
Tel 916.920.0300
Fax 916.920.8463

CH2MHILL

June 17, 1999

Michael Lidgard
U.S. Environmental Protection Agency
NPDES Permits Unit
1200 Sixth Avenue
Seattle, WA 98104

Subject: Additional NPDES Permit Application Information for the John M. Asplund Water Pollution Control Facility, Anchorage, Alaska

Dear Mr. Lidgard:

The purpose of this letter is to supply additional information to support the NPDES permit application (*Renewal Application for NPDES Permit and 301(h) Variance from Secondary Treatment*, October 1998) that was submitted for the John M. Asplund Wastewater Pollution Control Facility (Asplund WPCF). Specifically, additional information is provided to further clarify data pertaining to effluent flow, BOD_5, and TSS projections provided in the application (i.e., responses to questions II.A.4 and II.A.5).

Derivation of Effluent Limitations [40 CFR 125.61(b) and 125.62(e)(2)]

Under the current NPDES permit, effluent from the Asplund WPCF must meet "primary or equivalent treatment" requirements which, by regulation, include 30 percent removal of biochemical oxygen demanding material and suspended solids. Actual removal efficiencies for both BOD_5 and TSS at the Asplund WPCF are much greater than 30 percent, and this trend is likely to continue into the future.

The effluent limitations presented in response to question II.A.4.a are based on the wastewater characteristics of the major contributors to the Asplund WPCF, namely residential users, industrial users, and leachate generated from two local landfills. Each of these sources of wastewater were analyzed separately and then as a whole to determine their overall effect on Asplund WPCF effluent over time. A brief description of each wastewater component is provided below:

- Residential Users (Domestic Wastewater)

Domestic wastewater from residential and minor industrial sources represents a vast majority of the wastewater flow to the Asplund facility. Flow, BOD_5, and TSS data from January 1988 to March 1998 were obtained from records maintained by the Anchorage Water and Wastewater Utility (AWWU). This time period was selected because it represents data for the treatment plant's current configuration and capacity. Flow data and wastewater characteristics (e.g., BOD_5 and TSS) from April 1998 to December 2005 were forecasted using a linear regression that was generated from the January 1988 to March 1998 data. This regression represents an annual increase in flow of

approximately 1.6%, which closely approximates the projected increase in population (1.3%) during this time period.

- Industrial Users

The primary industrial user that was considered in this analysis was Alaska Seafood International (ASI). ASI is anticipating to commence operation in 1999 at partial capacity, and full capacity is anticipated to occur in the year 2001. Annual flow and fish waste volume estimates were provided by ASI for the years 1999 through 2005. Estimates of the additional BOD_5 and TSS loadings resulting from ASI's operations were based on information contained in *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Fish Meal, Salmon, Bottom Fish, Clam, Oyster, Sardine, Scallop, Herring, and Abalone Segment of the Canned and Preserved Fish and Seafood Processing Industry Point Source Category* (EPA, 1975). Estimates for both flow and fish waste volume were converted from an annual to a monthly basis to facilitate the wastewater trend analysis.

- Landfill Leachate

Leachate is collected from both the Anchorage Regional Landfill (ARL) and Merrill Field. Data pertaining to leachate flow and BOD_5 were maintained by the Anchorage Solid Waste Services for both landfills for the period of January 1988 through September 1995, however, data pertaining to TSS are not available. As with the domestic wastewater, flow and BOD_5 from October 1995 to December 2005 were forecasted using a linear regression that was generated from the January 1988 to September 1995 data. Since the operation of the ARL is relatively new (as compared to Merrill Field), and because ARL has a leachate treatment system, future leachate flow rates to Asplund WPCF are expected to increase, but leachate strength from the ARL will likely decrease with time.

Trend Analysis and Selection of Effluent Limitations

Data pertaining to the wastewater characteristics of each of the major contributors to the Asplund WPCF were analyzed in accordance with the statistical parameters set forth in the current permit: monthly average, peak weekly average within each month, and peak day within each month. Within each of these three data sets, long-term trends were developed projecting out to the year 2005. As mentioned previously, these trend lines are linear projections based on the historical data that is currently available.

Total influent BOD_5 and TSS loadings to the Asplund WPCF were determined using an average mass loading approach. Wastewater flows and pollutant concentrations (BOD_5 and TSS) related to each of the major contributors described above (e.g., domestic, industrial, and landfill leachate) were converted to mass loadings and then summed to determine the total BOD_5 and TSS loadings (lb/month) entering the Asplund WPCF. Regardless of whether the data was historical or projected, all influent data were reduced by 50% or 70% to simulate BOD_5 and TSS removal efficiencies, respectively. These values, which are a conservative estimate of the Asplund WPCF's ability to remove conventional pollutants, were obtained by subtracting 20 percent of the difference between observed and required removal efficiencies from the observed removal efficiency. As flows increase in the future, it is expected that the WPCF's removal efficiencies will decline. For example, the observed and required removal efficiencies for TSS are 80% and 30%, respectively. Twenty percent

of the difference between these values is 20% x 50% or 10%, and 80% - 10% = 70% TSS removal efficiency. An identical process was used for BOD_5, where the observed and required removal efficiencies are 55% and 30%, respectively.

The effluent limitations presented in response to question II.A.4.a are based on the analysis of BOD_5 and TSS projections for each of the three data sets shown in Figures 1-6. In each of these figures, the requested effluent permit limit is shown as a horizontal line that is approximately 20% greater in value than the endpoint of the upper range of the projected effluent trend. For example, the requested permit limit for monthly average BOD_5 (Figure 1) is 240 mg/L, which is slightly greater than the endpoint of the projected effluent trend (210 mg/L). This methodology results in a conservative effluent limitation estimate for BOD_5 and TSS for each of the three data sets analyzed.

Derivation of Effluent Volume and Mass Emissions [40 CFR 125.62(e)(2) and 125.67]

The table presented in response to question II.A.5.a was revised to better correlate with the data presented in response to question II.A.4. The revised data is presented in the table provided below:

	Existing Conditions/1997	Beginning of Permit/2000	End of Permit/2005	Design
Annual Average Flows (m^3/sec)	1.47	1.47	1.57 36 MGD	2.5
BOD_5 (mt/year)	5,627	6,520	8,123	15,758
Suspended Solids (mt/year)	3,034	3,336	4,154	10,249

You will find that when the values above are converted to a concentration basis, they match those values presented in the response to question II.A.4.

We will be happy to provide you with any additional assistance you request.

Sincerely,

CH2M HILL

Noel Williams
Project Manager

Cc: Brian Crewdson/AWWU

Enclosures

1 MGD = 1.547 cfs

1.57 m^3/sec [1 MGD / 1.547 cfs] [(3.281 ft)^3 / 1 m^3]

22.831

Figure 1. Asplund WWTF Average Monthly Effluent BOD_5 Concentration Projections (1988-2005) Assuming 50% Removal

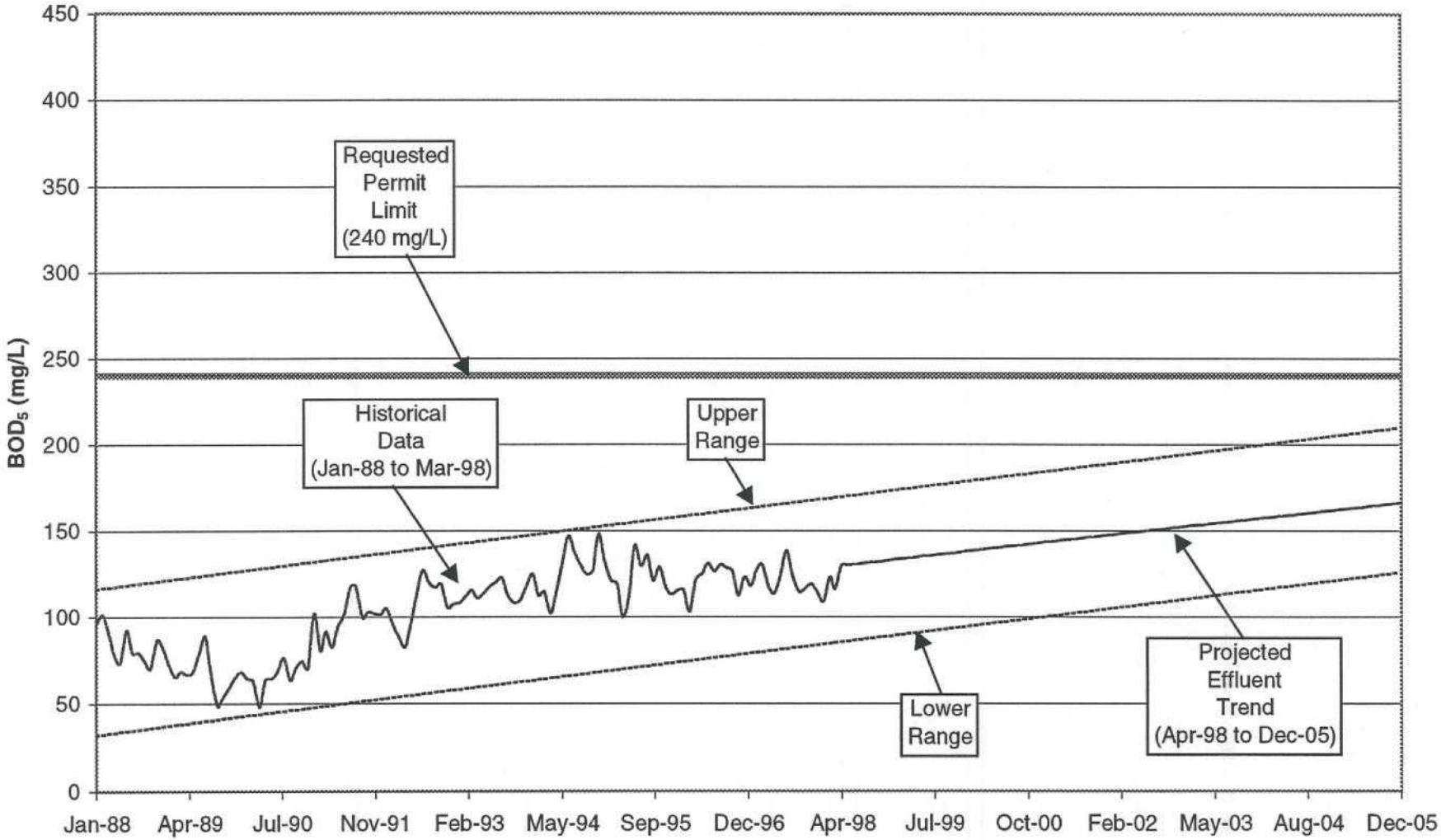


Figure 2. Asplund WWTF Peak Weekly Average Effluent BOD_5 Concentration Projections (1988-2005) Assuming 50% Removal

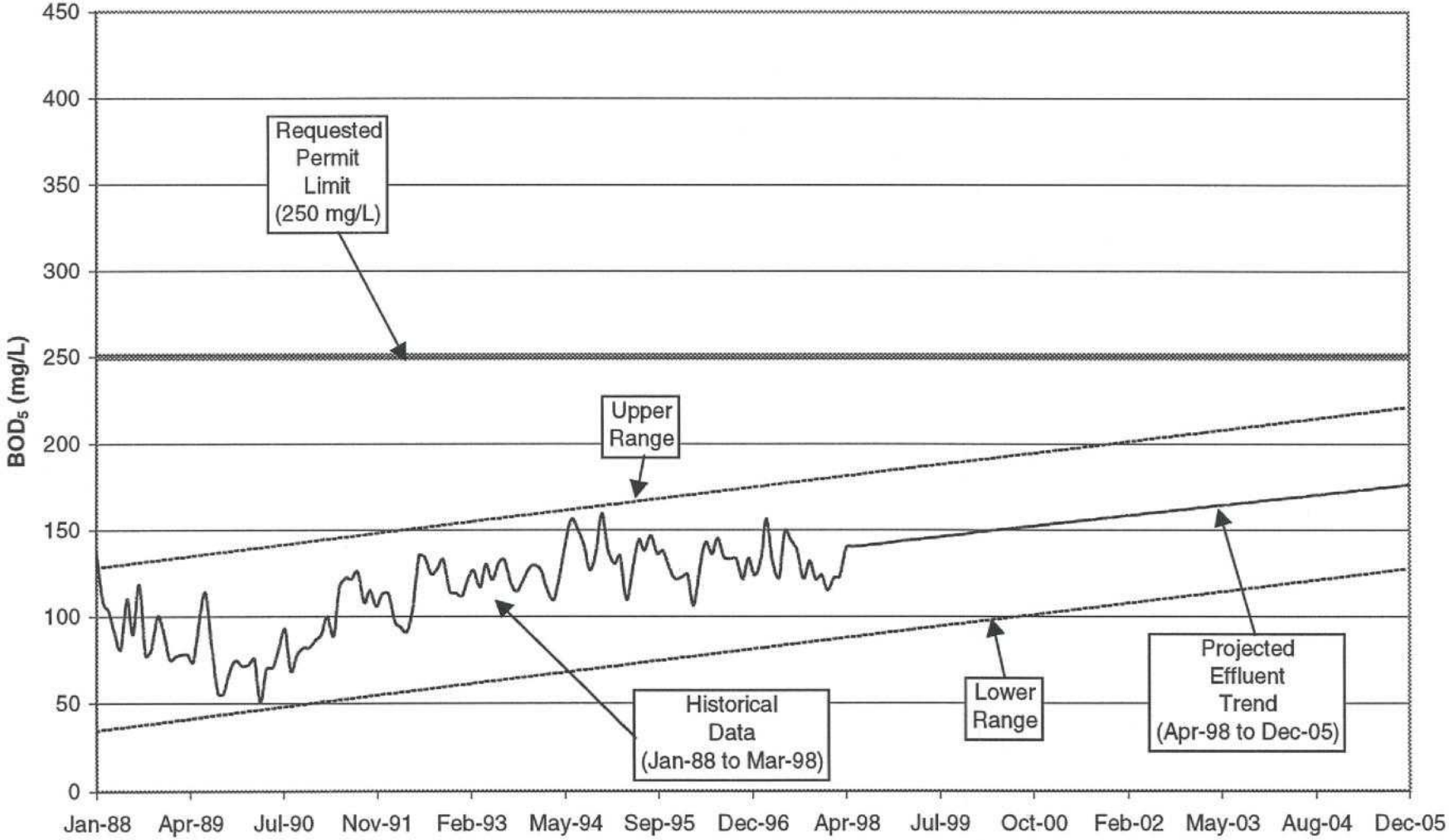


Figure 3. Asplund WWTF Peak Day per Month Effluent BOD_5 Concentration Projections (1988-2005) Assuming 50% Removal

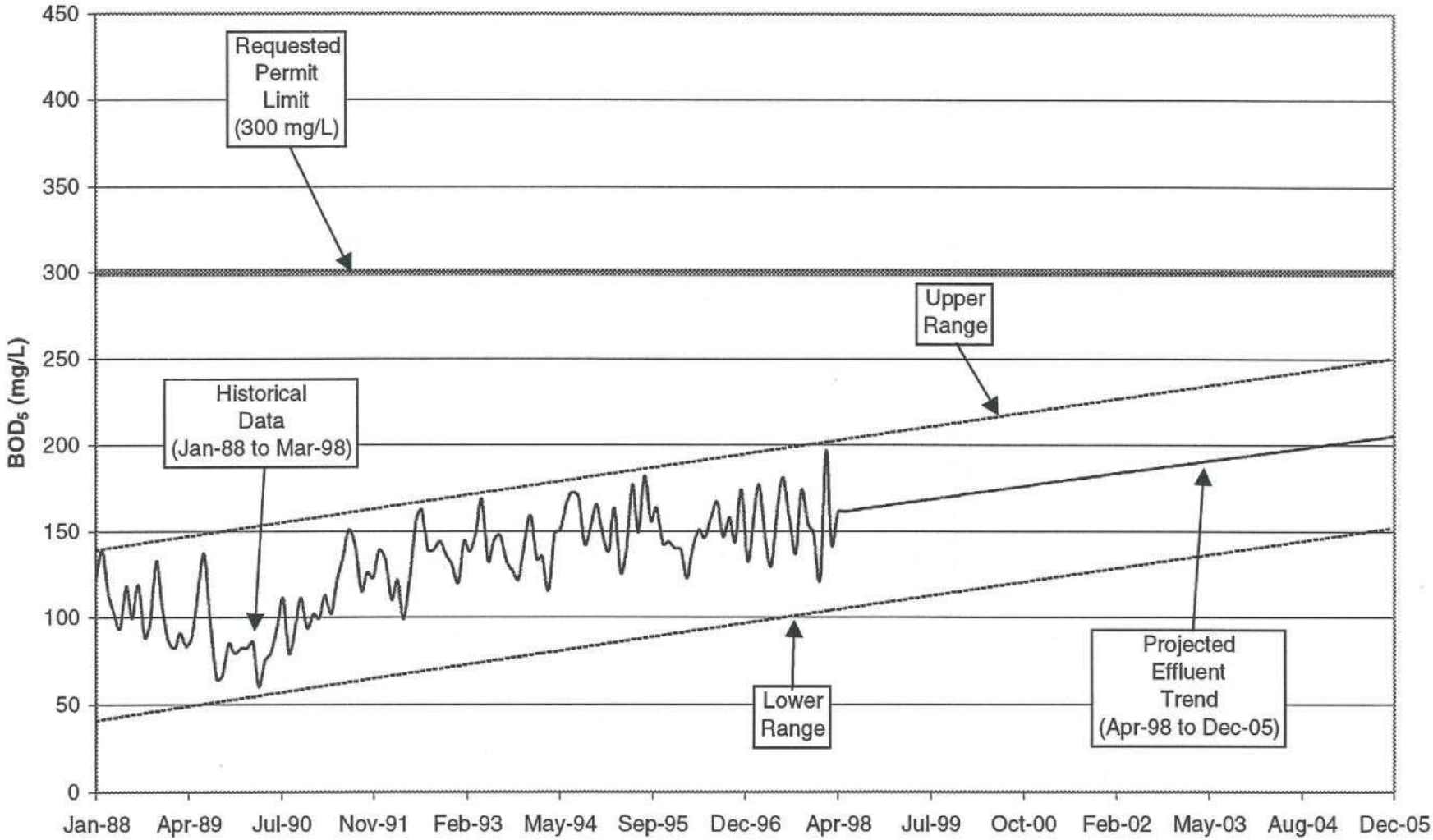


Figure 4. Asplund WWTF Average Monthly Effluent TSS Concentration Projections (1988-2005) Assuming 70% Removal

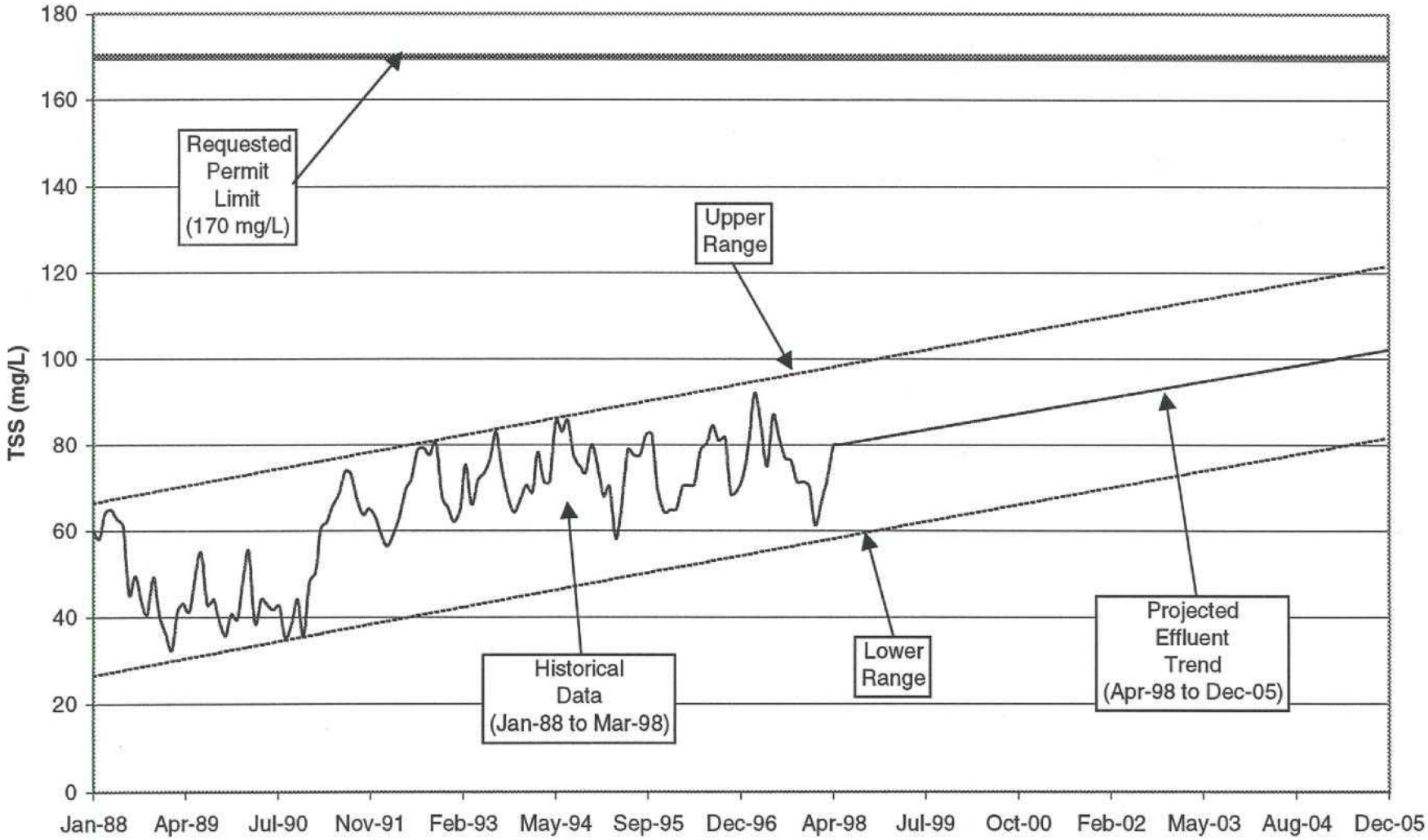


Figure 5. Asplund WWTF Peak Weekly Average Effluent TSS Concentration Projections (1988-2005) Assuming 70% Removal

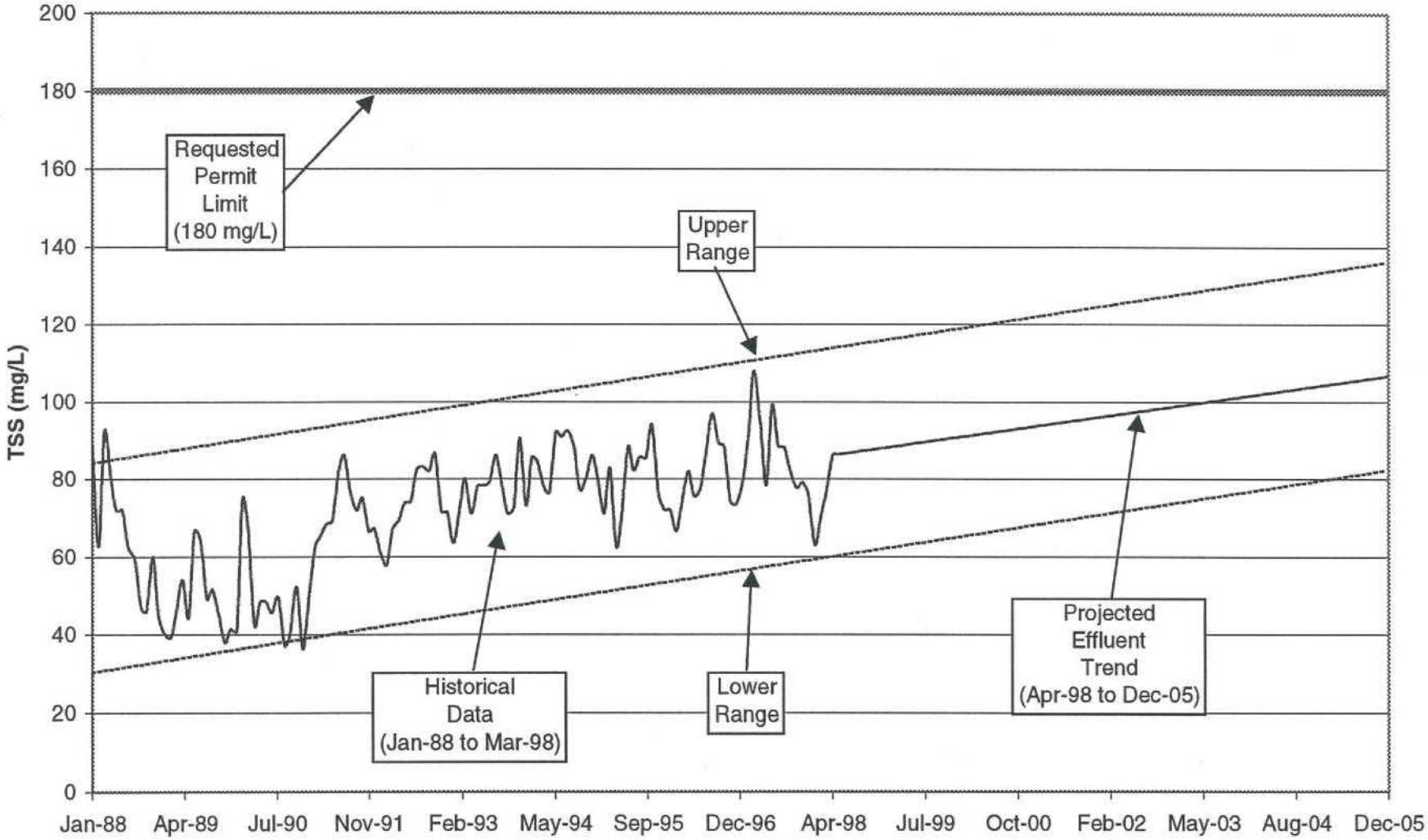
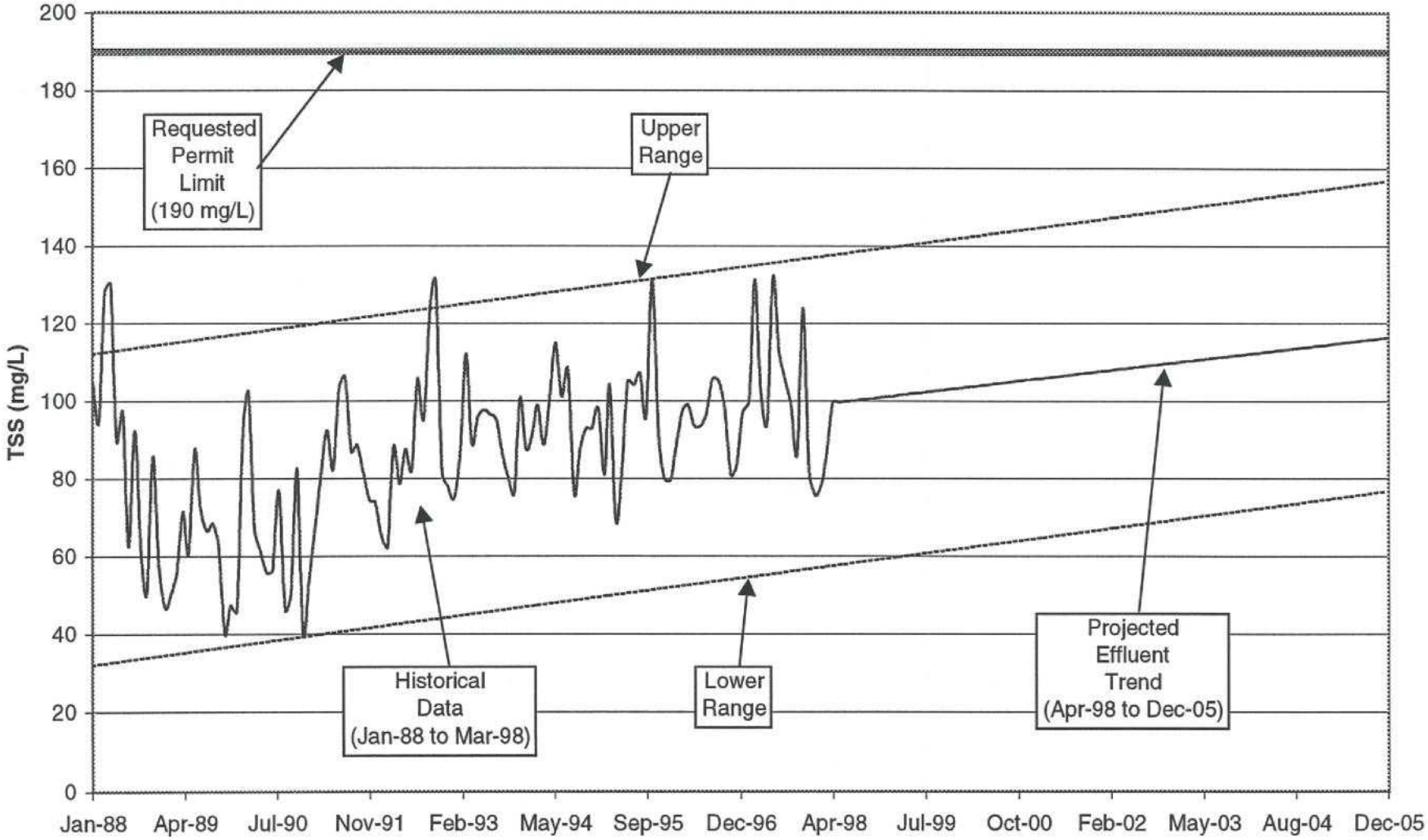


Figure 6. Asplund WWTF Peak Day per Month Effluent TSS Concentration Projections (1988-2005) Assuming 70% Removal



CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA
95833-2937
Tel 916.920.0300
Fax 916.920.8463

CH2MHILL

June 17, 1999

Michael Lidgard
U.S. Environmental Protection Agency
NPDES Permits Unit
1200 Sixth Avenue
Seattle, WA 98104

Subject: Information Regarding Solids Disposal for the John M. Asplund Water Pollution Control Facility, Anchorage, Alaska

Dear Mike:

In response to your request for additional information, this letter summarizes AWWU's plans for solids disposal at the Asplund WPCF.

The following table summarizes solids projected solids production at the WPCF.

TABLE 1
Solids Loading Summary

	Average Annual TSS (Dry Tons/day)			
Year	**Influent**	**Grit**	**Belt Filter Press[1]**	**Solids[2]**
Average 1996-1998	30.5	2.2	24.4	23.2
Year 2001	36.8	2.4	29.1	27.6
Year 2020	45.6	3.1	33.8	32.1
	Peak Week TSS (Dry Tons/day)			
Year	**Influent**	**Grit**	**Belt Filter Press**	**Solids**
Average 1996-1998	38.8	2.7	31.1	29.5
Year 2001	48.9	2.9	38.6	36.7
Year 2020	60.1	3.7	44.6	42.4

[1] Belt Filter Press Loading = Influent x approximately 80%
[2]Incinerator Loading = Belt Filter Press Loading x 95%. The existing multiple hearth incinerator capacity is approximately 25.3 dry tons per day (8,400 wet pounds per hour @ 25% solids).

The WPCF will continue to use incineration as its primary means of solids disposal up to the capacity of the incinerator (25.3 dry tons per day). When the capacity of the incinerator is exceeded, the additional solids will be landfilled at the Anchorage Regional Landfill and composted if feasible composting options become available. Use of the Anchorage Regional Composting Facility is currently being investigated.

If you have any additonal qustions regarding the Asplund WPCF's solids disposal plans, please let me know.

Sincerely,

Noel J. Williams

Noel Williams
Project Manager

Cc: Brian Crewdson/AWWU

FACSIMILE TRANSMISSION COVER SHEET

Attorney General's Office
100 Cushman Street, Suite 400
Fairbanks, AK 99701
PHONE: (907) 451-2944 FAX: (907) 451-2985

DATE: NOVEMBER 5, 1998

TO: SALLI BROUGH, 206 553-0165

FROM: CAM LEONARD, AAG
FAIRBANKS AGO

MESSAGE: PLEASE DISTRIBUTE THIS AS APPROPRIATE.

PLEASE INFORM US IMMEDIATELY
IF YOU DO NOT RECEIVE THIS TRANSMISSION IN FULL
(907) 451-2944 ASK FOR: JUDITH SMITH

Anchorage's Pt. Woronzof POTW Discharge

Outline of Permitting Options
10 November 1998

Problem:

The Municipality of Anchorage (MOA) operates its sewage treatment plant under a 1985 NPDES permit, that has been administratively extended by EPA since 1990. MOA expects that it will soon have trouble complying with the BOD limits in that permit, due to growing population, better control of infiltration water into the sewer system, and the opening of some large seafood processing plants. Because MOA operates the plant under a CWA §301(h) waiver, before EPA could reissue the permit, ADEC would have to first certify that the receiving water, Cook Inlet, is meeting all water quality standards. ADEC would be unable to do so, because of Alaska's recent decision to use the total recoverable test method to assess compliance with the state's aquatic life criteria for metals, and the high levels of total recoverable metals naturally present in Cook Inlet.

Even though the increased BOD in MOA's effluent would neither violate criteria nor harm the environment, MOA cannot get a new permit with revised BOD limits without somehow dealing with the unrelated fact that natural metals levels in Cook Inlet, when measured by the total recoverable test method, exceed Alaska's metals criteria. MOA and ADEC are considering the best way to address this permitting dilemma.

Options:

1. Site-Specific Criteria

State law allows for promulgation of site-specific criteria (SSC) under limited circumstances. In this case, ADEC could promulgate metals criteria for Cook Inlet that used the dissolved test method rather than total recoverable. This would be a rule-making subject to the state's APA process and to EPA's approval. It would work for all metals except mercury, which requires its own analysis and SSC.

2. SSC Based on Natural Conditions

State law also provides for another kind of SSC, set at the prevailing highest quality natural condition in the waterbody. This can be done as a permitting action, rather than as a rule-making. However, because the metals levels in MOA's effluent exceed the natural level for certain metals, this option would not offer a complete answer.

3. Modify BOD Limits in Existing Permit

This would be the easiest solution, except that EPA takes the position that it cannot modify the terms of an administratively-extended NPDES permit. The legal basis for this position deserves further discussion. Under this option, presumably we could avoid the metals issue for now.

4. Change the State's Metals Criteria

ADEC is already working on a potential revision of its aquatic life criteria for toxic substances, including metals. Part of that revision would be to adopt dissolved metals criteria, as recommended by EPA in its Interim Final Rule. However, such a revision would not occur soon enough to avoid MOA's anticipated BOD violations, and the out-come of any regulatory revision is necessarily uncertain.

permit - OK, may lose

5. Leave Existing Permit as is, and do a Compliance Order to Cover BOD Violations

This option would avoid both the metals issue and the issue of EPA's ability to modify an extended permit. But what would be the end-point of the compliance order? It could be ADEC's planned revision of its metals criteria to dissolved criteria, which may occur within the next year or two. But that revision probably won't convert the mercury criteria, and the compliance order could still leave MOA open to citizen suits in the meantime.

?

comply with ↑ BOD level? until year x?

6. Renew NPDES Considering Only Dissolved Metals in Cook Inlet

Since dissolved metals in Cook Inlet are low, if we only compared the dissolved metals to the state criteria, ADEC could give the certification that would allow EPA to renew the §301(h) waiver and permit. This would be consistent with the approach taken by EPA and DEC in 1991. However, it would contradict the position taken by ADEC last year, that its metals criteria are total recoverable.

standards - not an option. other permits? recently issued?

Plan:

Some of the options set out above raise significant legal and policy issues. There may be other options that are not listed above. In any case, MOA needs some guidance on the preferred option so that it can proceed appropriately. In the meantime, MOA continues to prepare its application for site-specific criteria under option #1 above. Pursuing this option will consume resources in the near term for both MOA and ADEC, and ultimately for EPA. If there is a better option, we should identify it soon.

A meeting between EPA, MOA and DEC is currently scheduled for November 10, 1998, at 2:00 p.m., to discuss this matter.

(1) The nature or quality of pollutants contained in the raw waste load of the applicant's process wastewater;

[*Comment:* (1) In determining whether factors concerning the discharger are fundamentally different, EPA will consider, where relevant, the applicable development document for the national limits, associated technical and economic data collected for use in developing each respective national limit, records of legal proceedings, and written and printed documentation including records of communication, etc., relevant to the development of respective national limits which are kept on public file by EPA.

(2) Waste stream(s) associated with a discharger's process wastewater which were not considered in the development of the national limits will not ordinarily be treated as fundamentally different under paragraph (a) of this section. Instead, national limits should be applied to the other streams, and the unique stream(s) should be subject to limitations based on section 402(a)(1) of the Act. See §125.2(c)(2).]

(2) The volume of the discharger's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the discharger's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the discharger's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technololgy.

(e) A variance request or portion of such a request under this section shall not be granted on any of the following grounds:

(1) The infeasibility of installing the required waste treatment equipment within the time the Act allows.

[*Comment:* Under this section a variance request may be approved if it is based on factors which relate to the discharger's ability ultimately to achieve national limits but not if it is based on factors which merely affect the discharger's ability to meet the statutory deadlines of sections 301 and 307 of the Act such as labor difficulties, construction schedules, or unavailability of equipment.]

(2) The assertion that the national limits cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factor(s) listed in paragraph (d) of this section;

[*Comment:* Review of the Administrator's action in promulgating national limits is available only through the judicial review procedures set forth in section 509(b) of the Act.]

(3) The discharger's ability to pay for the required waste treatment; or

(4) The impact of a discharge on local receiving water quality.

(f) Nothing in this section shall be construed to impair the right of any State or locality under section 510 of the Act to impose more stringent limitations than those required by Federal law.

§125.32 Method of application.

(a) A written request for a variance under this subpart shall be submitted in duplicate to the Director in accordance with part 124, subpart F.

(b) The burden is on the person requesting the variance to explain that:

(1) Factor(s) listed in §125.31(b) regarding the discharger's facility are fundamentally different from the factors EPA considered in establishing the national limits. The requester should refer to all relevant material and information, such as the published guideline regulations development document, all associated technical and economic data collected for use in developing each national limit, all records of legal proceedings, and all written and printed documentation including records of communication, etc., relevant to the regulations which are kept on public file by the EPA;

(2) The alternative limitations requested are justified by the fundamental difference alleged in paragraph (b)(1) of this section; and

(3) The appropriate requirements of §125.31 have been met.

Subpart E—Criteria for Granting Economic Variances From Best Available Technology Economically Achievable Under Section 301(c) of the Act—[Reserved]

Subpart F—Criteria for Granting Water Quality Related Variances Under Section 301(g) of the Act—[Reserved]

Subpart G—Criteria for Modifying the Secondary Treatment Requirements Under Section 301(h) of the Clean Water Act

AUTHORITY: Clean Water Act, as amended by the Clean Water Act of 1977, 33 U.S.C. 1251 *et seq.*, unless otherwise noted.

SOURCE: 59 FR 40658, Aug. 9, 1994, unless otherwise noted.

§125.56 Scope and purpose.

This subpart establishes the criteria to be applied by EPA in acting on section 301(h) requests for modifications to the secondary treatment requirements. It also establishes special permit conditions which must be included in any permit incorporating a section 301(h) modification of the secondary treatment requirements ("section 301(h) modified permit").

§125.57 Law governing issuance of a section 301(h) modified permit.

(a) Section 301(h) of the Clean Water Act provides that:

Administrator, with the concurrence of the State, may issue a permit under section 402 which modifies the requirements of paragraph (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that—

(1) There is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 304(a)(6) of this Act;

(2) The discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water;

(3) The applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

(4) Such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(5) All applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

(6) In the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

(7) To the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

(8) There will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(9) The applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 304(a)(1) of this Act after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.

For the purposes of this section, the phrase "the discharge of any pollutant into marine waters" refers to a discharge into deep waters of the territorial sea or the waters of

the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this section, and section 101(a)(2) of this Act. For the purposes of paragraph (9), "primary or equivalent treatment" means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biological oxygen demanding material and of the suspended solids in the treatment works influent, and disinfection, where appropriate. A municipality which applies secondary treatment shall be eligible to receive a permit pursuant to this subsection which modifies the requirements of paragraph (b)(1)(B) of this section with respect to the discharge of any pollutant from any treatment works owned by such municipality into marine waters. No permit issued under this subsection shall authorize the discharge of sewage sludge into marine waters. In order for a permit to be issued under this subsection for the discharge of a pollutant into marine waters, such marine waters must exhibit characteristics assuring that water providing dilution does not contain significant amounts of previously discharged effluent from such treatment works. No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish, and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish, and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge. Notwithstanding any other provisions of this subsection, no permit may be issued under this subsection for discharge of a pollutant into the New York Bight Apex consisting of the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

(b) Section 301(j)(1) of the Clean Water Act provides that:

Any application filed under this section for a modification of the provisions of—

(A) subsection (b)(1)(B) under subsection (h) of this section shall be filed not later than the 365th day which begins after the date of enactment of the Municipal Wastewater Treatment Construction Grant Amendments of 1981, except that a publicly owned treatment works which prior to December 31, 1982, had a contractual arrangement to use a portion of the capacity of an ocean outfall operated by another publicly owned treatment works which has applied for or received modification under subsection (h) may apply for a modification of subsection (h) in its own right not later than 30 days after the date of the enactment of the Water Quality Act of 1987.

(c) Section 22(e) of the Municipal Wastewater Treatment Construction Grant Amendments of 1981, Public Law 97–117, provides that:

The amendments made by this section shall take effect on the date of enactment of this Act except that no applicant, other than the city of Avalon, California, who applies after the date of enactment of this Act for a permit pursuant to subsection (h) of section 301 of the Federal Water Pollution Control Act which modifies the requirements of subsection (b)(1)(B) of section 301 of such Act shall receive such permit during the one-year period which begins on the date of enactment of this Act.

(d) Section 303(b)(2) of the Water Quality Act, Public Law 100–4, provides that:

Section 301(h)(3) shall only apply to modifications and renewals of modifications which are tentatively or finally approved after the date of the enactment of this Act.

(e) Section 303(g) of the Water Quality Act provides that:

The amendments made to sections 301(h) and (h)(2), as well as provisions of (h)(6) and (h)(9), shall not apply to an application for a permit under section 301(h) of the Federal Water Pollution Control Act which has been tentatively or finally approved by the Administrator before the date of the enactment of this Act; except that such amendments shall apply to all renewals of such permits after such date of enactment.

§ 125.58 Definitions.

For the purpose of this subpart:

(a) *Administrator* means the EPA Administrator or a person designated by the EPA Administrator.

(b) *Altered discharge* means any discharge other than a current discharge or improved discharge, as defined in this regulation.

(c) *Applicant* means an applicant for a new or renewed section 301(h) modified permit. Large applicants have populations contributing to their POTWs equal to or more than 50,000 people or average dry weather flows of 5.0 million gallons per day (mgd) or more; small applicants have contributing populations of less than 50,000 people and average dry weather flows of less than 5.0 mgd. For the purposes of this definition the contributing population and flows shall be based on projections for the end of the five-year permit term. Average dry weather flows shall be the average daily total discharge flows for the maximum month of the dry weather season.

(d) *Application* means a final application previously submitted in accordance with the June 15, 1979, section 301(h) regulations (44 FR 34784); an application submitted between December 29, 1981, and December 29, 1982; or a section 301(h) renewal application submitted in accordance with these regulations. It does not include a preliminary application submitted in accordance with the June 15, 1979, section 301(h) regulations.

(e) *Application questionnaire* means EPA's "Applicant Questionnaire for Modification of Secondary Treatment Requirements," published as an appendix to this subpart.

(f) *Balanced indigenous population* means an ecological community which:

(1) Exhibits characteristics similar to those of nearby, healthy communities existing under comparable but unpolluted environmental conditions; or

(2) May reasonably be expected to become re-established in the polluted water body segment from adjacent waters if sources of pollution were removed.

(g) *Categorical pretreatment standard* means a standard promulgated by EPA under 40 CFR Chapter I, Subchapter N.

(h) *Current discharge* means the volume, composition, and location of an applicant's discharge at the time of permit application.

(i) *Improved discharge* means the volume, composition, and location of an applicant's discharge following:

(1) Construction of planned outfall improvements, including, without limitation, outfall relocation, outfall repair, or diffuser modification; or

(2) Construction of planned treatment system improvements to treatment levels or discharge characteristics; or

(3) Implementation of a planned program to improve operation and maintenance of an existing treatment system or to eliminate or control the introduction of pollutants into the applicant's treatment works.

(j) *Industrial discharger* or *industrial source* means any source of nondomestic pollutants regulated under section 307(b) or (c) of the Clean Water Act which discharges into a POTW.

(k) *Modified discharge* means the volume, composition, and location of the discharge proposed by the applicant for which a modification under section 301(h) of the Act is requested. A modified discharge may be a current discharge, improved discharge, or altered discharge.

(l) *New York Bight Apex* means the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

(m) *Nonindustrial source* means any source of pollutants which is not an industrial source.

(n) *Ocean waters* means those coastal waters landward of the baseline of the territorial seas, the deep waters of the territorial seas, or the waters of the contiguous zone. The term "ocean waters" excludes saline estuarine waters.

(o) *Permittee* means an NPDES permittee with an effective section 301(h) modified permit.

(p) *Pesticides* means demeton, guthion, malathion, mirex, methoxychlor, and parathion.

(q) *Pretreatment* means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical, or biological processes, process changes, or by other means, except as prohibited by 40 CFR part 403.

(r) *Primary or equivalent treatment* for the purposes of this subpart means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biochemical oxygen demanding material and of the suspended solids in the treatment works

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